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TWO CASES OF MALFORMATION.

[Reported to the Boston Society for Medical Improvement, and communicated for the Boston Medical and Surgical Journal.]

BY CALVIN ELLIS, M.D.

CASE I.—*Extroversion of the Bladder in a Female, with peculiar Complications.*

THE case occurred in the practice of Dr. Cleveland. The child was small, and lived a week. The specimen was examined with Dr. J. B. S. Jackson. The general appearances were those of extroversion. The umbilical cord arose from the upper part of the mucous surface.

The labia were separated to a considerable extent, and the pubic bones were felt to be widely separated.

At about the middle of the mucous surface of the bladder, the small intestine opened largely. On dissection, this intestine was found to be three feet in length, larger than natural, and containing the usual secretions. Quite near to the above opening was another of the large intestine. This last was remarkably undeveloped, being about two and a half inches in length, and three lines in diameter. It terminated in a cul de sac, and contained a whitish secretion. Near the outlet was a small irregular offset from it. A well-developed appendix cæci seemed to exist independently, being situated by the side of the large intestine, near its termination, and having, apparently, a separate opening for itself upon the free surface of the bladder, a small probe being readily passed into it.

Across the external opening of these last two portions of intestine, two bands passed, which obscured the case. The protrusion that was observed during life was, undoubtedly, of the small intestine. The anus was wanting.

The uterus was formed in two entirely distinct and widely-separated portions, extending off obliquely upon each side. The right

portion was considerably the largest, and very nearly as large as the uterus would be of a child of this size. The arbor vitæ extended to the upper extremity, and the os tincæ was perfectly developed, as were also a Fallopian tube and ovary, which had their usual anatomical relations to the organ. The vagina upon this side was considerably developed, contained a thick, viscid secretion, and terminated inferiorly in a cul de sac. The left portion of the uterus was also considerably developed, and had its cavity, Fallopian tube and ovary. The os uteri also existed, but below this there was nothing of a vagina.

The outline of the uterus, on each side, was pretty distinctly felt before dissection.

The peritoneal cavity was rather irregularly developed.

The umbilical vein opened upon the convexity of the liver.

The left hypogastric artery was wanting.

On the left side were two ureters, one of which was considerably dilated.

Otherwise, nothing remarkable in the thorax or abdomen.

Over the sacrum was a well-defined tumor, between two and three inches in diameter, covered by integument and a very thin layer of fat. It contained a clear serous fluid, which escaped on dissection. This proved to be a case of spina bifida, of that peculiar form which Dr. J. B. S. Jackson described in the Boston Medical and Surgical Journal, Dec. 2d, 1858.

CASE II.—*Deficiency of the Abdominal Parietes. Extroversion of the Bladder.*

The specimen was sent by Dr. Alfred Hitchcock, of Fitchburg, who gave the following account of the case.

"The mother was 24 years old, and pregnant for the third time, having twice miscarried. The liquor amnii had escaped four or five days previously. The head, sacrum and one hand presented. The feet were brought down before delivery, during which a large portion of intestine was broken off and a kidney displaced. Considerable, but not dangerous, hæmorrhage followed. The placenta was very hard and small. The umbilical cord, being only an inch and a half in length, was ruptured as soon as the pelvis escaped from the os."

The child was examined with Dr. Jackson, and proved to be a male, of about the size of an eight months' fœtus.

The liver and a kidney protruded through a large irregular opening in the abdominal parietes.

Varus of the right foot.

The sides of the scrotum were separated about an inch, and the pubic bones about two thirds of an inch.

The lower part of the abdominal parietes presented the appearances usually found in extroversion of the bladder.

There was seen but one kidney, the ureter of which opened up-

on the surface of the malformed bladder. The supra-renal capsules were both present, but of small size.

The small intestine was about eighteen inches in length, and extended from the stomach to a point in the lower part of the parietes, where it was firmly attached, and terminated in a cul de sac. No large intestine.

There were two well-formed testicles. Nothing but cellular tissue behind the bladder.

Organs of the thorax normal.

PASSAGE OF A RAKE-HANDLE THROUGH THE SCROTUM AND ABDOMINAL PARIETES TO THE RIGHT HYPOCHONDRIUM. RECOVERY.

By H. B. Burnham, M.D., Epping, N. H.

[Communicated for the Boston Medical and Surgical Journal.]

On the 7th of May, 1860, J. B., aged 29 years, laborer, ascended a hay-mow for the purpose of removing some hay. On his return to the floor he attempted to slide down, and in so doing he slid upon a rake handle, which was accidentally left leaning against the mow. The handle entered at the lower or inferior portion of the scrotum, a little to the left of the mesial line, passing up over the pubes, then running somewhat diagonally across the abdomen, made its exit in the right hypochondriac region, between the tenth and eleventh ribs. It required considerable force to extract the instrument from its unnatural, and, to the patient, unpleasant position. The left testicle was completely turned out of its place, and almost denuded of its covering. Hæmorrhage was slight. A probe was with some difficulty passed up over the pubes. The testicle was carefully replaced, the wound cleansed of all clots of coagulated blood, and the edges brought together and retained by four sutures. The simple water dressing was used, and a lotion composed of tincture of arnica and water was constantly applied along the track of the wound. Rest and the horizontal position were enjoined. On the 8th there was extensive ecchymosis, showing distinctly the course the instrument had taken. Bowels tympanitic. Discharge from lower end of wound slight. Under appropriate treatment, the tympanitis yielded, and the wound began to unite by granulations. About a week subsequent, a messenger was sent to my office desiring my immediate attendance. Upon my arrival at the house, I learned that he had had chills on that day and the day previous. At the time of the visit there was considerable fever. By examination, I discovered a tumor situated on the track of the wound, about midway from either extremity. It was well defined, and fluctuation was distinctly perceptible. I at once opened it with a bistoury. It gave vent to a large quantity of pus, which continued to be discharged for a few days.

The incision then healed in the ordinary manner. Recovery was rapid and complete.

RESEARCHES UPON THE ERECTILE ORGANS OF THE FEMALE.

[Translated for the Bos. Med. and Surg. Journal, by Wm. Read, M.D.—Continued from p. 420.]

Mammalia.—I shall take for an illustration of the arrangement of the muscular apparatus of the internal organs of generation of one of the monodelph mammalia, one of the ruminantia—*the she-goat*. The body and the cornua of the uterus are lodged in the middle, and the tubes and ovaries in the lateral portions of a large membrane, which (abstractly considered as a fold of its surface) stretched in the pelvic cavity like a transverse partition, is fixed by its two anterior extremities to the superior dorsal walls of the abdomen; and by its two inferior and posterior extremities to the ventral walls. Although very thin and perfectly transparent throughout the great part of its length, this membrane, described by all anatomists as a simple conjunctival peritoneal web, presents, in many points, independently of the round ligaments, the muscular nature of which is well understood, folds and thickenings which, visible to the naked eye, exhibit an appearance very analogous to that of these ligaments; but in the most transparent portions, as well as in the locality of these folds, a microscopic examination everywhere shows smooth muscular fibres, in one place separating from each other and by their anastomosis forming networks, the meshes of which are more or less slack, while they are elsewhere crowded together and condensed into cords or muscular ribbons.

The middle part of this membrane is nothing else than the external layer of the muscular envelope of the uterus; in the median line we observe, throughout its whole depth, a decussation of muscular fibres from one side to the other. This decussation marks the junction of the two muscular systems, which ought to be studied at first separately and abstractly considered from their reciprocal penetration. Applying to this study the general data furnished by an examination of all the muscular systems which interlace (the abdominal muscles, that of the pharynx, the heart, &c. &c.), that all of their fibres in continuing their original direction traverse the median line more or less obliquely, and that in considering their direction with regard to the median line only, the ascending fibres on one side are in continuity with the descending fibres on the opposite, we clearly make out that the two kinds of fibres which we have observed in the broad ligament of birds, are represented, the upper by the lumbar ligament on one side, and the lower by the pubic ligament on the other side, and thus the whole portion of the muscular membrane intermediate to these two, fixed to the lateral portions of the sacrum, has become the muscular insertion of the great ligament and the utero-sacral ligaments on the sacrum and the sacro-iliac symphysis.

All these apparent complications result from a change of position and curvatures in that part of the oviduct which forms the tube, and especially from the approximation, the fusion of the two oviducts at their lower extremity to form the body of the uterus, single at least externally. This fusion of the two mucous canals involves this consequence, that the muscular apparatus peculiar to each of them intersects with its fellow and thus carries its lower insertions to the opposite side. The fibres which are inserted in the lumbar region, and the most elevated of which, condensed together towards the free border of the membrane, form this species of cord to which we have more particularly given the name of the superior round ligament, these fibres, in enveloping the tube and the ovary, descend upon the cornua and the body of the uterus. Arrived at the median line, they intersect with those of the opposite side, and, continuing their course, divide into three kinds; the lower go off to the rear towards the rectum and the anterior face of the sacrum (recto-uterine ligament, semi-lunar fold of Douglas, utero-sacral ligaments). Those in the middle seem to become continuous with a portion of the fibres of the round pubic ligament. The upper go off towards the lateral portions of the cavity of the pelvis and the sacro-iliac symphysis. It is to this last kind that there appears to belong a muscular fibre which forms the superior border of the triangular ligament of the ovary, and going across and beyond this gland, aids in the formation of the muscular cord which there connects the ovarial fringe of the fimbriated extremity.

With respect to the inferior and anterior portion of the muscular membrane, the round pubic ligament performs the same functions that the round lumbar ligament does in relation to the superior and posterior portion, that is to say, it is to a certain sense the radiating centre of a system of ascending muscular fibres which go to intersect with those of the opposite, in the median line; the round pubic ligament which is generally described as a muscular cord which goes from the spine of the pubis and from the labia majora to the uterine cornua or the superior angle of the uterus in the human female, is nothing less than that. It is by an altogether artificial arrangement that it is separated from the neighboring part of the large ligament with which it unites itself and in reality is continuous. Beginning at the point where it touches the anterior abdominal parietes, this ligament constantly sends off from its internal border, muscular fibres which spread themselves out in a fan-like form over the whole anterior surface of the uterus, from where the neck unites with the vagina, as far as the superior portion of the cornua. After having crossed the median line, the fibres which have an ascending direction go off in the large ligament of the opposite side; a certain number among them form the inferior border of the triangular ligament of the ovary, and reach the tip of the tube beyond this gland.

The uppermost muscular fibres of the round ligament form, by their intersection, a muscular membrane, with a semi-lunar border, which connects together the uterine cornua, and afterwards spread themselves on the tip of the tube, principally on its posterior and external face, and become continuous, a portion of them with the round lumbar ligament.*

To this system the greatest part of the muscular fibres seem to be attached, which, sent off to the rear upon the lateral borders of the rectum (semi-lunar fold of Douglas) and the anterior face of the sacrum (utero-sacral ligaments), embrace the cervical portion of the uterus, and, after intersecting each other on the median line, ascend the great ligament upon the opposite side, to fix themselves with that upon the lateral walls of the pelvic cavity.

In order not to mar the ensemble of the description, I left out certain details, to which I will now return. Thus I have spoken of the median intersection, and that from one side to the other only; this intersection is assuredly the most important, and the one which gives the key to the fusion of the two muscular membranes; it exists elsewhere, however, at many points, and to a marked degree just at the lateral borders of the body and the cornua of the uterus, in the form of an antero-posterior intersection. A portion of the fibres of the two systems pass, some before, and others behind the uterus, to gain the median line, and thus give this organ a contractile sheath, most exact and most complete; it is an arrangement perfectly analogous to that from which results the formation of the fibrous sheath of the straight muscles of the abdomen, by the intersection of the fibrous strands of the middle ten-

* The origin and actual structure of the round pubic ligament are very ill understood, from not having been studied with any minuteness, except in the human female, exactly where this organ is very complex. It is very evident in the majority of the mammalia, the insectivora, the rodentia, the ruminants, and the carnivora, that the muscular fibres of the round ligament do not traverse the anterior abdominal walls, that they spread themselves out in the simplest manner upon the posterior face of this wall in the inguinal region, and fix themselves on the cellular envelope of the transverse muscle, as the round lumbar ligament does, which sometimes is attached to the lumbar *fascia transversalis*, sometimes to the diaphragm, and sometimes to one side. In all these cases we find nothing in the round ligament but these bundles of smooth fibres. But in certain species of rodents and insectivora (mole, rabbit) the fibres of the transverse muscle are thus drawn towards the abdominal cavity at the point where they furnish the insertion for the round ligament. They there describe loops, whose convexity projects from the abdominal side, and form a cone usually very short, upon which the proper fibres of the round ligament spread themselves out.

In the human female this peculiarity attains its highest degree of development. The transverse and the small oblique muscles preserve through life the arrangement they present in the fœtus, and in the males of the rodentia and the insectivora, the striated fibres of the *gubernaculum testis* (the *cremaster* that is to be) project into the centre of the round ligament in very elongated loops, which extend beyond the middle portion of this ligament. None of these striated fibres, however, enter into direct connection with the uterus, nor are any of them continuous with the muscular fibres peculiar to the organs of generation; these connect themselves with, and attach themselves solely to, that species of cord which the muscles of the abdomen send out to meet them. As to the fibres of the round ligament which traverse the inguinal canal to be inserted, a part in the pubis, and a part to lose themselves in the mons veneris and the labia majora, it is constituted of nothing but cellular tissue, vessels and nerves. In the interior of the inguinal canal, the cremaster artery, a branch of the epigastric, and the genito-crural nerve, each divide into two branches, of which one goes up into the interior of the round ligament, while the other follows the inguinal canal, to lose itself in the mons veneris and the labia majora; and besides numerous veins very much developed during pregnancy, situated in the round ligament and emanating from the uterine plexus, maintain, through the medium of the *plexus pudendalis* with which they are connected in front of the pubis, a very curious communication between the erectile organs of copulation and those of the internal organs of generation.

don of the two great trigastric muscles (the great oblique on one side, the little oblique and the transverse on the other).*

Finally, independently of the fibres which appertain to the two systems intersecting upon the median line, there also appears to be a certain number which avoid this intersection, and remain throughout their whole course on the same side; such are the fibres which detach themselves from the external border of the round pubic ligament, and spread out in the form of a fan in the upper portion of the broad ligament (the tip of the tube), in order, no doubt, to re-ascend to the lumbar region. These fibres are not very marked in the she-goat, but in the rabbit, at the period of gestation, they seem, nevertheless, as numerous as those which detach themselves from the internal border and intersect each other; in that case the thickening of the round ligament forms a complete and perfect fan-like expansion at the centre of the broad ligament.

There is not a single species of the mammalia which I have been able to observe (ruminants, rodents, carnivora, insectivora), in which we do not clearly recognize every one of the essential and characteristic features of the description which I have just given. The modifications have no effect, except upon details altogether secondary, and result from the predominant development of this or that part from changes in direction of different sections of the oviducts† and their more or less complete fusion.

What connection, moreover, is there between the arrangement which I have just pointed out as being most common to all monodelph mammalia, and the description which the most accredited anatomists give of the muscular structure of the internal organs of generation in the human female? What analogy between this large muscular layer, stretched from one side to the other of the abdominal cavity, which embraces, so to speak, the uterus in passing, and this thick muscular wall condensed around the uterine cavity, and with which we know no other connections than the muscular cords of the round ligaments, the inguinal and the ligaments which are attached to the inner extremity of the ovary? Some anatomists clearly point out the existence of muscular fibres in the utero-sacral ligaments, others indicate, as an exceptional occurrence, certain muscular fibres lost, some how or other, in the large ligaments, and making their appearance only at the time of gestation, but without pointing out their connections, their insertions, or their uses, and without stating, definitely, in what portion of the large ligaments they observed them.

[To be continued.]

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* See Thompson *Prolegomenes de l'Anat. Chirurg.* de Velpeau, 2d ed.

† By the term oviduct, I mean the whole of the canal primitively simple and uniform, the different portions of which constitute the tube, the cornua of the uterus, and the uterus properly so called.

THE ARSENIC EATERS OF STYRIA.

By Charles Heisch, Lecturer on Chemistry at Middlesex Hospital.

At the last meeting of the Manchester Philosophical Society, I observe that Dr. Roscoe called attention to the arsenic eaters of Styria. Having for the last two years been in communication with the medical men and other residents in the districts where this practice prevails, I shall feel obliged if you will allow me through your journal to make known the facts I have at present collected. The information is derived mainly from Dr. Lorenz, Imperial Professor of Natural History, formerly of Salzburg, from Dr. Carle Arbele, Professor of Anatomy in Salzburg, and Dr. Kottowitz, of Neuhaus, besides several non-medical friends. If human testimony be worth anything, the fact of the existence of arsenic eaters is placed beyond a doubt. Dr. Lorenz, to whom questions were first addressed, at once stated that he was aware of the practice, but added, that it is generally difficult to get hold of individual cases, as the obtaining of arsenic without a doctor's certificate is contrary to law, and those who do so are very anxious to conceal the fact, particularly from medical men and priests. Dr. Lorenz was, however, well acquainted with one gentleman, an arsenic eater, with whom he kindly put me in communication, and to whom I shall refer again more particularly. He also says that he knows arsenic is commonly taken by the peasants in Styria, the Tyrol, and the Salzkammergut, principally by huntsmen and woodcutters, to improve their wind and prevent fatigue. He gives the following particulars:—

The arsenic is taken pure in some warm liquid, as coffee, fasting, beginning with a bit the size of a pin's head, and increasing to that of a pea. The complexion and general appearance are much improved, and the parties using it seldom look as old as they really are; but he has never heard of any case in which it was used to improve personal beauty, though he cannot say that it never is so used. The first dose is always followed by slight symptoms of poisoning, such as burning pain in the stomach and sickness, but not very severe.

Once begun, it can only be left off by very gradually diminishing the daily dose, as a sudden cessation causes sickness, burning pains in the stomach, and other symptoms of poisoning, very speedily followed by death.

As a rule, arsenic eaters are very long lived, and are peculiarly exempt from infectious diseases, fevers, &c.; but unless they gradually give up the practice, invariably die suddenly at last.

In some arsenic works near Salzburg with which he is acquainted, he says the only men who can stand the work for any time are those who swallow daily doses of arsenic, the fumes, &c., soon killing the others. The director of these works, the gentleman before alluded to, sent me the following particulars of his own

case. (This gentleman's name I suppress, as he writes that he does not wish the only thing known about him in England to be the fact that he is an arsenic eater; but if any judicial inquiry should arise which might render positive evidence of arsenic eating necessary, his name and testimony will be forthcoming.)

"At 17 years of age, while studying assaying, I had much to do with arsenic, and was advised by my teacher, M. Bönsch, Professor of Chemistry and Mineralogy at Eisleben, to begin the habit of arsenic eating. I quote the precise words he addressed to me: 'If you wish to continue the study of assaying, and become hereafter superintendent of a factory, more especially of an arsenic factory, in which position there are so few, and which is abandoned by so many, and to preserve yourself from the fumes which injure the lungs of most, if not of all, and to continue to enjoy your customary health and spirits, and to attain a tolerably advanced age, I advise you—nay, it is absolutely necessary, that besides strictly abstaining from spirituous liquors, you should learn to take arsenic; but do not forget, when you have attained the age of 50 years, gradually to decrease your dose, till from the dose to which you have become accustomed, you return to that with which you began, or even less.' I have made trial of my preceptor's prescriptions till now, the 45th year of my age. The dose with which I began, and that which I take at present, I enclose; they are taken once a day, early, in any warm liquid, such as coffee, but not in any spirituous liquors." The doses sent were No. 1, original dose, three grains; No. 2, present dose, twenty-three grains of pure white arsenic in coarse powder. Dr. Arbele says this gentleman's daily dose has been weighed there also, and found as above. Mr. —— continues:—"About an hour after taking my first dose (I took the same quantity daily for three months), there followed slight perspiration with griping pains in the bowels, and after three or four hours a loose evacuation; this was followed by a keen appetite, and a feeling of excitement. With the exception of the pain, the same symptoms follow every increase of the dose. I subjoin as a caution, that it is not advisable to begin arsenic eating before the age of twelve, or after thirty years." In reply to my question, if any harm results from either interrupting or altogether discontinuing the practice, he replies: "Evil consequences only ensue from a long-continued interruption. From circumstances I am often obliged to leave it off for two or three days, and I feel only slight languor and loss of appetite, and I resume the arsenic in somewhat smaller doses. On two occasions, at the earnest solicitations of my friends, I attempted entirely to leave off the arsenic. The second time was in January, 1855. I was induced to try it a second time, from a belief that my first illness might have arisen from some other cause. On the third day of the second week, after leaving off the dose, I was attacked with faintness, depression of spirits, mental weakness, and a total

loss of the little appetite I still had; sleep also entirely deserted me. On the fourth day I had violent palpitation of the heart, accompanied by profuse perspiration. Inflammation of the lungs followed, and I was laid up for nine weeks, the same as on the first occasion of leaving off the arsenic. Had I not been bled, I should most likely have died of apoplexy. As a restorative, I resumed the arsenic eating in smaller doses, and with the firm determination never again to be seduced into leaving it off, except as originally directed by my preceptor. The results on both occasions were precisely the same, and death would certainly have ensued had I not resumed arsenic eating." One of the most remarkable points in this narrative is, that this gentleman *began* with a dose which we should consider poisonous. This is the only case of which I have been able to obtain such full particulars, but several others have been mentioned to me by those who knew the parties, and can vouch for their truth, which I will briefly relate.

One gentleman, besides stating that he is well aware of the existence of the practice, says he is well acquainted with a brewer in Klagenfurth, who has taken daily doses of arsenic for many years. He is now past middle life, but astonishes every one by his fresh, juvenile appearance; he is always exhorting other people to follow his example, and says, "See how strong and fresh I am, and what an advantage I have over you all! In times of epidemic fever or cholera, what a fright you are in, while I feel sure of never taking infection."

Dr. Arbele writes: "Mr. Curator Kursinger (I presume curator of some museum at Salzsburg), notwithstanding his long professional work at Lungau and Binzgau, knew only two arsenic eaters —one the gentleman whose case has just been related, the other the ranger of the hunting district in Grossarl, named Trauner. This man was at the advanced age of 81, still a keen chamois hunter, and an active climber of mountains; he met his death by a fall from a mountain height while engaged in his occupation. Mr. Kursinger says he always seemed very healthy, and every evening regularly, after remaining a little too long over his glass, he took a dose of arsenic, which enabled him to get up the next morning perfectly sober and quite bright. Professor Fenzl, of Vienna, was acquainted with this man, and made a statement before some learned society concerning him, a notice of which Mr. Kursinger saw in the *Wiener Zeitung*; but I have not been able to find the statement itself. Mr. Krum, the pharmaceutist here, tells me that there is in Stürsburg a well-known arsenic eater, Mr. Schmid, who now takes daily twelve, and sometimes fifteen grains of arsenic. He began taking arsenic from curiosity, and appears very healthy, but always becomes sickly and falls away if he attempts to leave it off. The director of the arsenic factory before alluded to is also said to be very healthy, and not to look so old as 45, which he really is.

As a proof how much secresy is observed by those who practise arsenic eating, I may mention that Dr. Arbele says he inquired of four medical men, well acquainted with the people of the districts in question, both in the towns and country, and they could not tell of him any individual case, but knew of the custom only by report.

Two criminal cases have been mentioned to me, in which the known habit of arsenic eating was successfully pleaded in favor of the accused. The first by Dr. Kottowitz, of Neuhaus, was that of a girl taken up in that neighborhood on strong suspicion of having poisoned one or more people with arsenic, and though circumstances were strongly against her, yet the systematic arsenic eating in the district was pleaded so successfully in her favor, that she was acquitted, and still lives near Neuhaus, but is believed by every one to be guilty. The other case was mentioned by Dr. Lorenz. A woman was accused of poisoning her husband, but brought such clear proof that he was an arsenic eater, as fully to account for arsenic being found in the body. She was, of course, acquitted.

One fact mentioned to me by some friends is well worthy of note. They say:—"In this part of the world, when a graveyard is full, it is shut up for about twelve years, when all the graves which are not private property by purchase are dug up, the bones collected in the charnel-house, the ground ploughed over, and burying begins again. On these occasions, the bodies of arsenic eaters are found almost unchanged, and recognizable by their friends. Many people suppose that the finding of their bodies is the origin of the story of the vampire." In the *Medicinischer Jahrbuch des Oster: Kaiserstaates*, 1822, *neuest Folge*, there is a report by Professor Schallgruber, of the Imperial Lyceum at Grätz, of an investigation undertaken by order of Government in various cases of poisoning by arsenic. After giving details of six *post-mortem* examinations, he says:—"The reason of the frequency of these sad cases appears to me to be the familiarity with arsenic which exists in our country, particularly in the higher parts. There is hardly a district in Upper Styria where you will not find arsenic in at least one house, under the name of hydrach. They use it for the complaints of domestic animals, to kill vermin, and as a stomachic to excite an appetite. I saw one peasant show another on the point of a knife how much arsenic he took daily, without which, he said, he could not live; the quantity I should estimate at two grains. It is said, but this I will not answer for, that in that part of the country this poison is used in making cheese; and, in fact, several cases of poisoning by cheese have occurred in Upper Styria, one not long since. The above-mentioned peasant states, I believe truly, that they buy the arsenic from the Tyrolese, who bring into the country spirits and other medicines, and so are the cause of much mischief." This report is, I believe, mentioned in

Orfila's *Toxicology*, and one or two other works, but I have not seen it quoted myself; it is interesting, as being early and official evidence of arsenic eating. Since I received the above information, a gentleman who was studying at this hospital, told me that, when an assistant in Lincolnshire, he knew a man who began taking arsenic for some skin disease, and gradually increased the dose to five grains daily. He said he himself had supplied him with this dose daily for a long time. He wrote to the medical man with whom he was assistant, and I have been for a long time promised full particulars of the case; but beyond the fact that he took five grains of arsenic, in the form of Fowler's solution, daily, for about six years, and could never leave it off without inconvenience, and a return of his old complaint, I have as yet not received them. I have delayed publishing these facts for some time, hoping to get information on some other points, for which I have written to my friends abroad; but as considerable delay takes place in all communications with them, I have thought it better to publish at once the information I have already received. All the parties spoken of are people on whom the fullest reliance can be placed, and who have taken much pains to ascertain the foregoing particulars. The questions which still remain unanswered are these:—

1st. Can any official report be obtained of the trials of the two people mentioned by Drs. Kottowitz and Lorenz?

2d. Do medical men in these districts, when using arsenic medicinally, find the same cumulative effects as we experience here? Or is there anything in the air or mode of living which prevents it?

3d. Can any evidence be obtained as to how much of the arsenic taken is excreted? To show whether the body gradually becomes capable of enduring its presence, or whether it acquires the power of throwing it off.

I have proposed to the gentleman who furnished me with the particulars of his own case, either to make an estimate of the arsenic contained in his own urine and fæces during twenty-four hours, or collect the same and forward them to me that I may do so, but as yet have received no answer.—*Pharmaceutical Journal.*

THE LARYNGOSCOPE.

[From the Berlin Correspondence of the Medical Times and Gazette.]

As far as I am acquainted with the periodical literature of our profession, no notice has as yet appeared in your columns, or in those of your cotemporaries, with regard to the highly practical results obtained on the Continent by the use of the laryngoscope.

Having had occasion to convince myself of the comparative facility with which the larynx can be explored by means of this simple contrivance, I feel confident that its importance for the diagnosis of laryngeal disease cannot be overrated, and it will be a

mere truism to state that we shall be able to attack affections of the larynx with far greater discrimination and success, if the uncertainties, inseparable from a symptomatic diagnosis, can thus be replaced by the precise results which a distinct view of the affected parts must afford.

A few weeks ago, I was present at a *post-mortem* of a phthisical individual, whose larynx had been carefully examined, a short time prior to decease, by Professor Traube. The changes found in the larynx bore testimony to the accuracy of the results obtained by laryngoscopic investigation. The following remarks on the instrument, and its application, are mainly extracted from a monograph, published in the early part of the year, by Professor Czermak, who, together with Dr. Türck, of Vienna, has the great merit of having re-directed the attention of the profession to this important means of diagnosis. Indeed, these Viennese physicians may be said to have re-invented the larynx-speculum. Apart from its decided practical usefulness, the fact of the laryngoscope being originally an English invention ought to stimulate English surgeons to take an active part in the reform of laryngo-pathology, to which the general application of the instrument is likely to lead.

In Liston's "Practical Surgery," page 417, we read, under the head of "Ulcerated Glottis," the following remarks: "A view of the parts may be sometimes obtained by means of a speculum—such a glass as is used by dentists—on a long stalk, previously dipped in hot water, introduced with its reflecting surface downwards, and carried well into the fauces." This pregnant hint of Liston's remained unnoticed till 1855, when Garcia published a most valuable series of auto-laryngoscopic investigations, instituted for the purpose of elucidating the mechanism of the human voice. In these experiments the image of the larynx was reflected from a mirror placed against the soft palate, so as to be received upon a second mirror placed in front of the observer (auto-laryngoscopy). An elementary knowledge of cateptrics will suffice to explain the principles upon which Liston-Garcia's method of investigation is founded. The examination itself is conducted in the following manner: A metallic mirror—varying in size from six to fourteen lines in diameter, in shape either square with rounded edges, as recommended by Czermak, or oval, according to Türck's proposal, or, as it has been found convenient by Dr. Levin, of Berlin, semicircular, with a concave inferior margin—soldered to a slightly flexible metallic handle, is to be introduced into the well-opened mouth, and fixed in such an angle against the uvula and soft palate as to throw incident luminous rays upon the larynx, and to reflect an image of the parts thus illuminated into the eye of the observer. To prevent the mirror becoming dim by the condensation of vapor upon its surface, it is necessary to warm it previous to introduction by dipping it into hot water or holding the unpol-

ished surface over the flame of a small spirit-lamp. Garcia made use of the direct rays of the sun in his experiments: as this source of illumination, however, is not always available, and, even if so, attended with obvious inconveniences in practice, Czermak proposes the use of a perforated concave mirror of 7—12″ focal distance, by which the light of an ordinary lamp can be concentrated upon the larynx-speculum, the eye of the observer being applied to the perforation. As the distinctness of the image will depend upon the brilliancy of the illumination employed, it will be found advantageous to concentrate the light of the lamp upon the concave mirror, by means of a powerful bi-convex lens. Dr. Levin, of this city, has devised a highly convenient apparatus for this purpose, consisting of a tin tube carrying a convex lens of two and a half inches focal distance, and about the same diameter, which, by means of a simple contrivance, can be fixed horizontally over an Argand lamp after the shade has been removed.

The perforated concave reflector can either be held between the teeth of the observer, fixed on a suitable ivory handle, as recommended by Czermak, or attached to a large spectacle-frame, according to Stellwag's proposal, or it can be suspended from a support screwed to the corner of the table on which the lamp is placed. The latter contrivance will be found the most convenient for practical purposes. I think it was first introduced by Dr. Levin.*

It will be most convenient to place the lamp to the right of the patient, who is to be examined in the sitting posture, his hands resting upon his knees, his body slightly advanced, and his head slightly reclining backwards. According to Professor Traube's advice, the lamp, concave mirror, and larynx-speculum ought to be on the same level, and the angle formed by the rays incident upon, and reflected from, the concave mirror as acute as possible. On this account it will be wise to place the lamp a little behind the patient. The observer supports the head and chin of the patient with his left, and introduces the larynx-speculum with his right hand, looking through the perforation of the concave mirror, by means of which he illuminates the pharynx.

By causing the patient to sound alternately the Roman vowels, *a e*, the velum and uvula will be raised so as to admit of the mirror being introduced with greater facility. In pressing the speculum against the soft palate and uvula, great care must be taken to avoid touching the posterior wall of the pharynx, the palatine arches, and the base of the tongue, to prevent the supervention of vomiting and deglutition. "In this manner," as Czermak says, "it is possible to look into the very depths of the pharynx, to obtain a distinct image of the individual parts of the larynx, and, as

* Mr. Yearsley has requested us to state that he has used Mr. Avery's ear-lamp in this way for several years past.—Ed. Med. Times and Gazette.

I first demonstrated in my own person, to see the bifurcation of the trachea reflected through the widely-opened glottis, with the tracheal rings shining through thin mucous membrane."

Of course, considerable practice and a certain amount of dexterity are required for successful handling of the laryngoscope, notwithstanding the simplicity of the principle upon which the method is founded.

The difficulties are mainly owing to the great irritability of the palate, which, in some individuals, is so considerable as not to tolerate the contact of a foreign body; others are unable to keep their mouths open for any length of time, or to command the position of the tongue, which ought to be well flattened and protruded. Some patients, as Prof. Traube correctly remarks, suffer from a kind of "moral nausea," threatening to vomit as soon as they are told to open their mouths. This extreme irritability can be overcome by methodically accustoming the parts to the contact of foreign bodies, as it is often requisite prior to surgical operations on the palate. I remember reading that bromide of potash has the power of lowering the sensibility of the pharyngeal mucous membrane; it might deserve a trial in very refractory cases.

In general, however, the irritability of uvula and soft palate will be found very inconsiderable, so that they can be raised and pressed against the posterior wall of the pharynx without any inconvenience to the individual experimented upon. In Professor Traube's clinic I have seen an individual sitting for nearly ten minutes with the larynx-speculum applied to the fauces, so that fifteen medical men who were present could successively examine the reflected image of the glottis without any reflex phenomena supervening to interrupt the observations.

In this case the mouth of the patient was held open by a very convenient instrument, devised by Dr. Levin. The handle of the larynx-mirror is attached by a ball-hinge to the upper bar of the mouth-speculum, so as to admit of the larynx-mirror being easily adjusted for the purpose of demonstration.

In the fifth chapter, Czermak details his method for obtaining a view of the posterior surface of the velum, the naso-pharyngeal cavity, &c., and he represents the image attainable by rhinoscopic investigation, the commencement of the Eustachian tubes being also rendered visible. Wilde has already investigated the latter by a similar method.

To obtain an image of these parts, a speculum must be introduced under the velum, with its reflecting surface turned obliquely upwards, so as to illuminate the naso-pharyngeal cavity. A speculum is proposed for this purpose, to which a sliding wire-hook is attached, for the purpose of raising the velum.

Examinations of this kind are, of course, surrounded by numerous difficulties, and can only be expected to succeed if a combination of favorable circumstances obtains.

The auto-laryngoscopic observations instituted by Czermak for physiological purposes are mainly confirmative of the results obtained by Garcia's celebrated investigations, and his work will amply repay perusal to those who are interested in the important questions involved in the study of the mechanism of the human voice.

The pathological observations which conclude the work, twenty in number, illustrating most varied and interesting forms of laryngeal disease, as revealed by the larynx-speculum, are calculated to convince the most sceptical of the great advantage which must accrue to the practitioner from the adoption of this method of investigation.

The possibility of the eye serving as a guide for the hand in the topical treatment of affections of the larynx and deep parts of the pharynx, is also proved by some of these observations. You must permit me to reserve my detailed statement for a future communication. Two of these cases—the first and third—during the course of which laryngotomy had to be performed, on account of stenosis of the larynx, are of particular interest, being the first in which, by a novel adaptation of laryngoscopy, the glottis was investigated from below. This was effected by introducing a small mirror attached to a suitably bent handle, with its reflecting surface turned upwards, into a fenestrated tracheotomy-tube. By illuminating this speculum with a concave reflector, the most brilliant and accurate images of the lower aspect of the glottis, &c., were obtained, and the nature of the pathological changes affecting the parts clearly ascertained. This method promises to be of great importance for the diagnosis and treatment of deep-seated affections of the larynx, particularly in cases of laryngeal tumors which cannot be attacked from above. By reversing the reflecting surface of the mirror introduced into the tracheotomy-tube, the deep parts of the trachea might also be explored.

REMARKABLE OBSTETRICAL CASE.—GANGRENE OF UTERUS AND PLACENTA, TOGETHER WITH INTENSE INFLAMMATION OF THE PERITONEUM AND HALF THE SURFACE OF THE CHILD.

Reported by G. W. Phillips, M.D., of St. Louis, Mo.

January 27th, 1859, at 12, M., I was called to see Mrs. H., who had had slight labor-pains for four hours previous to my seeing her. On making a vaginal examination, the membranes were found protruding through the os uteri and were quite tense; but no part of the portal could be detected, so as to determine the presentation. The patient was troubled with constant retching, and vomited every few minutes. She also complained of great soreness and tenderness over the whole abdomen. After waiting three hours without any change in symptoms or progressive labor,

I concluded to rupture the membranes, with the hope of thus increasing the pains and accelerating the labor. A large amount of water was discharged, but even after this the position of the fœtus could not be accurately ascertained by the finger. On introducing the whole hand, I found the ear immediately above the pelvic brim and the head was laying crossways, the occiput to the right ilium and face towards the left, whilst the head and neck were curved and doubled up on the shoulder, and had not apparently been moved at all by the labor-pains. I endeavored to rectify this by bringing the vertex to the (so-called) second position, but was unable to do so, and as the pelvis seemed roomy, I concluded, after waiting two hours more, to give ergot and trust to the labor-pains changing the position after the head was in the cavity of the pelvis. Two grains of ergot was administered and the dose repeated in a half hour, without any increase in the pains or any effect whatever. The soreness of the abdomen increased rapidly, the stomach and diaphragm seemed to become involved in the inflammation; and in order to relieve this state of things, I bled her to the amount of sixteen ounces, and administered one-third grain of sulphate of morphia. She was eased of the pain in the course of an hour, but vomited everything taken into the stomach. I ordered her to take very strong table tea in small quantities, and if the pains returned to call me at 8, P. M. At 12 o'clock, I was sent for, and on examining found the child had not moved in the least. The pains were now more pressing than at first, and the soreness had increased so much that I could not press upon the fœtal head, in my renewed endeavors to correct the position, without causing the most excruciating pain. She continued in this condition without any material change of general symptoms or increase in force of pains until morning, when the whole surface became cold; pulse feeble and 130 in a minute; face haggard in expression; and from this time she gradually sank until 4, P. M., when she died.

On making an imperfect post-mortem examination, the child was found in the position above described; the whole of the placenta and major part of the uterus was in a state of mortification; the peritoneum was highly inflamed, as also one half of the surface of the child's body. The stench arising from the sphacelation of the parts was too disagreeable to admit of a more minute examination.

The principal peculiarity of the case was disclosed by the autopsy, viz.: that the uterus and placenta should be in a state of gangrene; the peritoneum and surface of the fœtus so highly inflamed without producing greater effects during labor, and causing more marked symptoms of constitutional disturbance prior to death. The pains were, during the whole time, trifling compared with what we often find; and although there was more than usual soreness over the abdomen, it was not excessive until shortly before dissolution. This soreness had existed several days prior to

the commencement of labor, and no doubt inflammation had been set up before I saw the patient at all, and the child was dead when my first vaginal examination was made; for without such a state of things we cannot account for the *post-mortem* appearances. Dr. Parks (of this city) was in attendance during the last stage of this case with me, and assisted in the autopsy.—*St. Louis Medical and Surgical Journal.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JULY 12, 1860.

NOTES ON NURSING.—The influence of all hygienic circumstances in connection with the sick is now universally admitted, and it would seem needless therefore to enter upon a subject about which much has been said, and the importance of which is generally acknowledged. But the interest which attaches to one who has become world-renowned by her devotion to the cause of the sick, is a sufficient excuse for briefly alluding to a work recently published by Florence Nightingale, entitled "Notes on Nursing."

This book, which is pronounced of much value, and recommended to every medical and non-medical man who cares for the sick, relates to the hygiene of sickness, those parts of the management of the sick, as has been well said, too much neglected by the profession, and supposed to belong to the department of the patient himself, to the architect, or to the board of hospital directors. It contains little that is particularly new, but it is essentially practical, and being based on large experience, and written in a plain, earnest, and simple style, cannot fail to do a good and lasting service, by creating a new interest in what is of the first importance in the treatment of the sick.

We do not propose to notice at any length this instructive little book, as it has already been carefully reviewed on both sides of the water, and from the price at which it is sold may be in the hands of every one; but we cannot forbear paying a passing tribute to one whose life has been spent in the alleviation of the sufferings of the sick and afflicted, and we take the present opportunity to refer to her last and not least important work.

We learn from a brief biographical sketch, that this gifted woman was born in Florence, the birthplace of the great and honored of every age, and that from her earliest childhood she displayed a constant and active sympathy with the poor and destitute living in the vicinity of her home, being, as the writer expresses it, "never wearied with doing good."

Considering the poor to be her especial care, and determined to devote her life to the cause in which she has been so eminently successful, she subsequently passed some time in a hospital at Kaiserworlt, on the Rhine, where she received that systematic training to which her success must be, in part at least, attributed.

The pamphlet before us, and it is little more, is the result of her study and observations, and contains a world of practical information,

invaluable not only to her own sex, to whom it is particularly addressed, each of whom, as she truly remarks, has, at one time or other of her life, charge of the personal health of somebody, but to every medical as well as non-medical man, not one of whom can fail to profit by its wise and simple teachings.

As before stated, little is presented that is really new. All may be reduced to a few well-understood rules, comprising the importance of fresh air, abundant light, and perfect cleanliness of body, not only to those in health, but to those who are prostrated by sickness, and consequently peculiarly in need of the influence of all these hygienic conditions. The various details comprising the modes by which these conditions may be best and most conveniently obtained, are dwelt upon somewhat at length, and these, together with some practical observations on the immediate management of the sick, make up one of the most readable as well as instructive books that we have seen.

Perhaps as important a chapter as any one, is that upon beds and bedding, and for the reason that less attention is generally paid to the comfort and health of the patient in this respect than in almost any other. The importance of keeping the sick bed free from all noxious emanations is particularly insisted upon. "If you consider that an adult in health exhales by the lungs and skin, in the twenty-four hours, three pints at least of moisture, loaded with organic matter ready to enter into putrefaction, that in sickness the quantity is often greatly increased and the quality more noxious, just ask yourself next, where does all this moisture go to? Chiefly into the bedding, because it cannot go anywhere else. And it stays there, because, except perhaps a weekly change of sheets, scarcely any other airing is attempted. A nurse will be careful to fidgetiness about airing the clean sheets from clean damp, but airing the dirty sheets from noxious damp will never even occur to her. Besides this, the most dangerous effluvia we know of are from the excreta of the sick—these are placed, at least temporarily, where they must throw their effluvia on to the under side of the bed, and the space under the bed is never aired; it cannot be, with our arrangements. Must not such a bed be always saturated, and be always the means of re-introducing into the system of the unfortunate patient who lies in it, that excrementitious matter, to eliminate which from the body nature had expressly appointed the disease?"

It is also recommended that the bed be low, that the patient may have the advantage of the current produced by the throat of the chimney; also, that it be in the lightest spot in the room, and where, when necessary, the patient may be able to see out of the window without effort. These are but a few of the suggestions which abound in this little book, more of which, had we the space, we would gladly give; but we must content ourselves with this brief notice.

We are sorry to find our authoress at fault in any respect, but we are impelled to the conviction, from one or two assertions, that she has not given the same attention to the study of chemistry that she has devoted to the subject which has made her prëeminent; and when she says that sugar consists of pure carbon, we must beg to be allowed to differ from one whose authority on some other points we would not for a moment call in question. Nor are we quite prepared to admit that gelatine is entirely without nutritive power. But lest we lay ourselves open to the charge of cavilling, we will bring our re-

marks to a close. Florence Nightingale has done a good work, and by her example has won a name that will continue to shine with increasing brightness, and which reflects lasting honor on her country and her race. In calling to mind her deeds of self-denial and courage, let us not forget, however, that noble band of sisters whose lives are not less devoted to the service of the sick, but whose names will never be known to fame, and whose only reward in this world will be the consciousness of having passed a life in the exercise of the noblest faculties with which man is endowed.

New Orleans School of Medicine.—We have received the annual circular of the above institution, from which we learn that the regular course of lectures will commence on Thursday, the 15th of November next, and terminate in the latter part of March, 1861. It appears that this school was chartered in 1856. and has consequently been in operation about four years—during which period the progressive increase in the size of the classes has been quite remarkable. The institution has received a large appropriation from the State, and we are glad to see that much attention is given to clinical instruction, for which there are more than usual facilities. We heartily wish success to this and all other institutions whose aim and object are to confer upon their pupils a sound and thorough medical education.

Mortality in Providence, R. I.—From the City Registrar's Report, we learn that there were only 60 deaths in the city during the month of June, which number was six less than in the preceding month, and five less than in June, 1859. One fourth of the whole number of deaths was from consumption, which indicates not that this disease is more prevalent or fatal than usual, but that the deaths from other diseases are less than usual. Over 30 per cent. were under 5 years of age, and only 18.3 per cent. were from zymotic diseases. The health of the city is remarkably good at the present time; much better than during the preceding month of this year. There has been no smallpox in the city since the first of June.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, July 7th, 1860.

DEATHS.

	Males.	*Females*	*Total.*
Deaths during the week,	45	43	88
Average Mortality of the corresponding weeks of the ten years, 1850–1860,	40.2	37.0	77.2
Average corrected to increased population,	..	..	88.1
Deaths of persons above 90,	1	..	1

Mortality from Prevailing Diseases.

Consumption.	Chol. Infantum.	Scarlet Fever.	Pneumonia.	Measles.	Smallpox.
18	6	4	7	3	6

METEOROLOGY.

From Observations taken at the Cambridge Observatory.

Mean height of Barometer,	29.946	Highest point of Thermometer,	83°
Highest point of Barometer,	30.158	Lowest point of Thermometer,	55°
Lowest point of Barometer,	29.722	General direction of Wind,	Northerly.
Mean Temperature,	71°.6	Whole am't of Rain in the week	0.31 in.

Books Received.—Obscure Diseases of the Brain and Disorders of the Mind, &c. By Forbes Winslow, M.D., D.C.L. Oxon. (From the Publishers.)

Married,—In this city, 5th inst., Jasper H. York, M.D., to Miss Mary E. Watts, both of Boston.

Deaths in Boston for the week ending Saturday noon, July 7th, 88. Males, 45—Females, 43.—Apoplexy, 2—disease of the brain, 1—inflammation of the brain, 1—cancer, 2—cholera infantum, 6—cholera morbus, 1—consumption, 18—convulsions, 4—infantile disease, 1—puerperal, 1—dropsy, 4—dropsy in the head, 4—drowned, 2—dysentery, 1—epilepsy, 1—bilious fever, 1—scarlet fever, 4—typhoid fever, 2—gastritis, 1—disease of the heart, 1—hemorrhage, 1—congestion of the lungs, 2—disease of the lungs, 1—inflammation of the lungs, 7—marasmus, 2—measles, 3—peritonitis, 1—pleurisy, 2—premature birth, 1—rheumatism, 2—smallpox, 6—teething, 1—unknown, 1.

Under 5 years, 41—between 5 and 20 years, 9—between 20 and 40 years, 20—between 40 and 60 years, 11—above 60 years, 7. Born in the United States, 62—Ireland, 21—other places, 5.